

Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. *Applicant/Contact name and address:* Duane Ullman
2. *Type of action:* Application to Change a Water Right—Non-Irrigation
42M 30160424
- 3.
4. *Water source name:* Groundwater
5. *Location affected by project:* Section 12, T24N, R58E and Sections 6, 7 18, T24N, R59E, all in Richland County.
6. *Narrative summary of the proposed project, purpose, action to be taken, and benefits:*

This change authorization proposes to manifold water rights Statement of Claims 42M 117148-00 and 42M 117150-00, Groundwater Certificates 42M 89088-00 and 42M 111274-00, into one system. It also proposes to add seven stock tanks to the system. The combined use would be for two domestic, two acres of lawn/garden, and livestock up to 533 animal units (AU). The combined appropriation would be three wells with a total of 23 GPM and 17.2 AF. The manifold system will divert and use water year-round. Lawn and garden will use water from April 1 to October 31. The wells are located in SESE Section 12, T24N, R58E. The places of use are:

Domestic, lawn/garden, livestock barns in SESE, Sec 12, T24N R58E
One tank in NWSE Lot 3, Sec 7, T24N R59E
One tank in NWSENE Sec 12, T24N R58E
One tank in SWNENW Sec 7, T24N R59E
One tank in NWSE Lot 4, Sec 6, T24N R59E
One tank in NESW Lot 4, Sec 7, T24N R59E
One tank in NWNW Lot 1, Sec 18, T24N R59E
One tank in SWSW Lot 2, Sec 18, T24N R59E

The DNRC shall issue a change authorization if an applicant proves the criteria in 85-2-402, MCA are met.

7. *Agencies consulted during preparation of the Environmental Assessment:*

Montana Department of Natural Resources and Conservation (DNRC)
Montana Natural Heritage Program website
USDA Web Soil Survey
National Wetlands Inventory website

Part II. Environmental Review

1. Environmental Impact Checklist:

<p>PHYSICAL ENVIRONMENT</p>

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity - *Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.*

The proposed project is within DNRC Basin 42M, Yellowstone River below Powder River. Water is diverted through three wells 535 ft, 40 ft and 39.5 ft deep, with the static water level at 210 ft, 9 ft and 9 ft, respectively. These wells are a manifold system with a combined flow rate of 23 GPM and volume 17.2 AF. The applicant has historically supplied the water to 533 cow-calf pairs, two households and two acres of lawn and garden. Adding seven stock tanks will not expand the animal units, flow rate and volume.

In this semi-arid region of eastern Montana, surface channels are predominantly ephemeral streams—streams which flow in response to snowmelt and precipitation events. Therefore, the well is not expected to disrupt adjacent surface water flows.

Determination: No significant impacts.

Water quality - *Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

The proposed project is groundwater appropriation. The project involves three existing wells in manifold which deliver water to two households, lawn/garden and stock tanks via pipelines. The North Fork First Hay Creek flows through the Applicant's project area. North Fork First Hay Creek is an ephemeral stream which flows in response to snowmelt and precipitation events. The proposed project is not expected to disrupt its surface water flow.

Determination: No significant impacts.

Groundwater - *Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

According to the Richland County Water Resources Survey, the aquifer underlying the project site is the Fort Union aquifer of the Tertiary period. Groundwater quality of the Fort Union aquifer is characterized by elevated alkalinity and salinity within suitable level for livestock consumption. On the surface, the place of use drains to North Fork First Hay Creek, which makes its way into the Yellowstone River about 6 miles southeast.

One well has been in use since 1975; the second well 1994, and the third well 2000. Since the applicant will maintain the same uses and will not increase the total flow rate and volume, the addition of seven stock tanks is not expected to impact groundwater quality or supply. The added stock tanks will enable the applicant to rotate the animals and manage grazing distribution more effectively, which in turn would benefit vegetation, soil health, wildlife, and water quality.

Determination: No significant impacts.

DIVERSION WORKS - *Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

All three wells have ¾ HP submersible pumps with check valves installed to prevent backflow, as well as electrical disconnects and shut-off valves. The manifold system is in a heated pump house. There is a 44-gallon pressure tank in the pump house with a pressure switch in case water volume drops due to a pump failure. All pipelines are 1- to 1.25-inch poly or PVC rated at least 100 psi, buried 7 feet deep. Each tank has a ball valve as well as a shut-off float switch. The distance from the southernmost tank to the northernmost tank is about 1.5 miles. There are stop-and-waste valves and curb stops throughout the lines.

Determination: No significant impacts.

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species - *Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any “species of special concern,” or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or “species of special concern.”*

The major land use in the project area has been agriculture. According to the Montana Natural Heritage Program website, 38 animal species listed with “sensitive status” by the Bureau of Land Management (BLM) occur in Richland County. Northern Myotis, Piping Plover and Yellow-billed Cuckoo are listed as “threatened” species by BLM and occur in Richland County. Both BLM and the U.S. Fish & Wildlife Service list the Whooping Crane and the Pallid Sturgeon as Endangered; BLM also lists the Least Tern as Endangered. There are no federally-listed plants species within the project area.

Whooping Crane

The federally endangered Whooping Crane migrate between Canada and Texas. They occasionally cross the eastern portion of Montana, although their main migratory corridor is

found to the east in the Dakotas. While the species was close to extinction during the early and mid-1900s, intensive management has helped to begin the recovery process. The species is still very rare across its range and at risk of extinction. Whooping Crane has a verified occurrence in Richland County.

Least Tern

The Least Tern prefers unvegetated sand-pebble beaches and islands of large reservoirs and rivers in northeastern and southeastern Montana; specifically, the Yellowstone River and the Missouri River systems.

Pallid Sturgeon

The Pallid Sturgeon is currently listed as “At High Risk” in Montana due to extremely limited and/or rapidly declining population numbers, range and/or habitat, making it highly vulnerable to global extinction or extirpation in the state. The pallid sturgeon is one of the rarest fishes in North America and was federally listed as endangered in 1990. The Pallid Sturgeon has been declining during at least the past 50 years with only about 200 adults remaining in the upper Missouri River and limited natural reproduction.

Determination: The groundwater development is not expected to have significant impacts.

Wetlands - *Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

According to the National Wetlands Inventory website, there are no wetlands in or near the proposed place of use and point of diversion.

Determination: No significant impacts.

Ponds - *For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

Determination: Not applicable.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

According to the USDA Web Soil Survey, the soils within the place of use are predominantly Williams loams on 0 to 4 percent slopes, and Shambo loam on 2 to 4 percent slopes. The Williams loam consists of deep, well drained clay loam on low hills of moraines. It is classified as nonsaline to slightly saline (0.0 to 4.0 mmhos/cm), with medium susceptibility to compaction and slight erosion hazard. Prime farmland if irrigated. The Shambo loam consists of deep, well drained loam on stream terraces with low runoff potential. The addition of seven stock tanks would enable the applicant to rotate the livestock more effectively, thus improving range condition and soil health. No permanent degradation to soil quality, stability or moisture content is anticipated.

Determination: No significant impacts.

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

According to soil survey, the Williams loam can expect a range production of 1,450 pounds per acre per year in a normal year. The Shambo loam can expect a range production of 1,500 pounds per acre per year in a normal year. This forage productivity is adequate to support the applicant's stocking rate. While traffic around the stock tanks invites weed invasion, it is not expected to exceed what normally occurs in cattle-concentrated area.

Determination: No significant impacts.

AIR QUALITY - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

A normal amount of dust is expected with cattle movement. However, it should not present a risk to vegetation or animals. Additional stock tanks will also help spread out cattle, improve vegetation cover and reduce soil erosion, all of which benefit air quality.

Determination: No significant impacts.

HISTORICAL AND ARCHEOLOGICAL SITES - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project.*

Determination: NA-Project not located on State or Federal Lands.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

Determination: No additional impacts on other environmental resources were identified.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

Determination: There are no known local environmental plans or goals in the area.

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

Determination: The project is located in rural, private land that has historically been used for livestock. It will not have an impact on recreation or wilderness activities.

HUMAN HEALTH - Assess whether the proposed project impacts on human health.

Determination: This project will have no impact on human health.

PRIVATE PROPERTY - Assess whether there are any government regulatory impacts on private property rights.

Yes___ No X If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.

Determination: There are no additional governmental regulatory impacts on private property rights associated with this application.

OTHER HUMAN ENVIRONMENTAL ISSUES - For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.

Impacts on:

- (a) Cultural uniqueness and diversity? No significant impact
- (b) Local and state tax base and tax revenues? No significant impact
- (c) Existing land uses? No significant impact
- (d) Quantity and distribution of employment? No significant impact
- (e) Distribution and density of population and housing? No significant impact
- (f) Demands for government services? No significant impact
- (g) Industrial and commercial activity? No significant impact
- (h) Utilities? No significant impact
- (i) Transportation? No significant impact
- (j) Safety? No significant impact
- (k) Other appropriate social and economic circumstances? No significant impact

2. *Secondary and cumulative impacts on the physical environment and human population:*

Secondary Impacts: This assessment does not indicate possible secondary impacts on the physical environment and/or the local human population.

Cumulative Impacts: This assessment does not indicate possible cumulative impacts on the physical environment and/or the local human population.

3. ***Describe any mitigation/stipulation measures:*** N/A
4. ***Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:*** An alternative analysis of the project identifies a no-action alternative to the addition of seven stock tanks. This alternative would not have any direct impacts that are typically associated with livestock watering. The no-action alternative would not allow the Applicants to meet the purpose of grazing management.

PART III. Conclusion

1. ***Preferred Alternative:*** Issue a water use permit if the Applicants prove the criteria in §85-2-311, MCA are met.

2 Comments and Responses

4. ***Finding:***
Yes___ No_X_ Based on the significance criteria evaluated in this EA, is an EIS required?

If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action: No significant impacts have been identified; therefore, an EIS is not necessary.

Name of person(s) responsible for preparation of EA:

Name: Lih-An Yang

Title: Water Resource Specialist

Date: May 4, 2023